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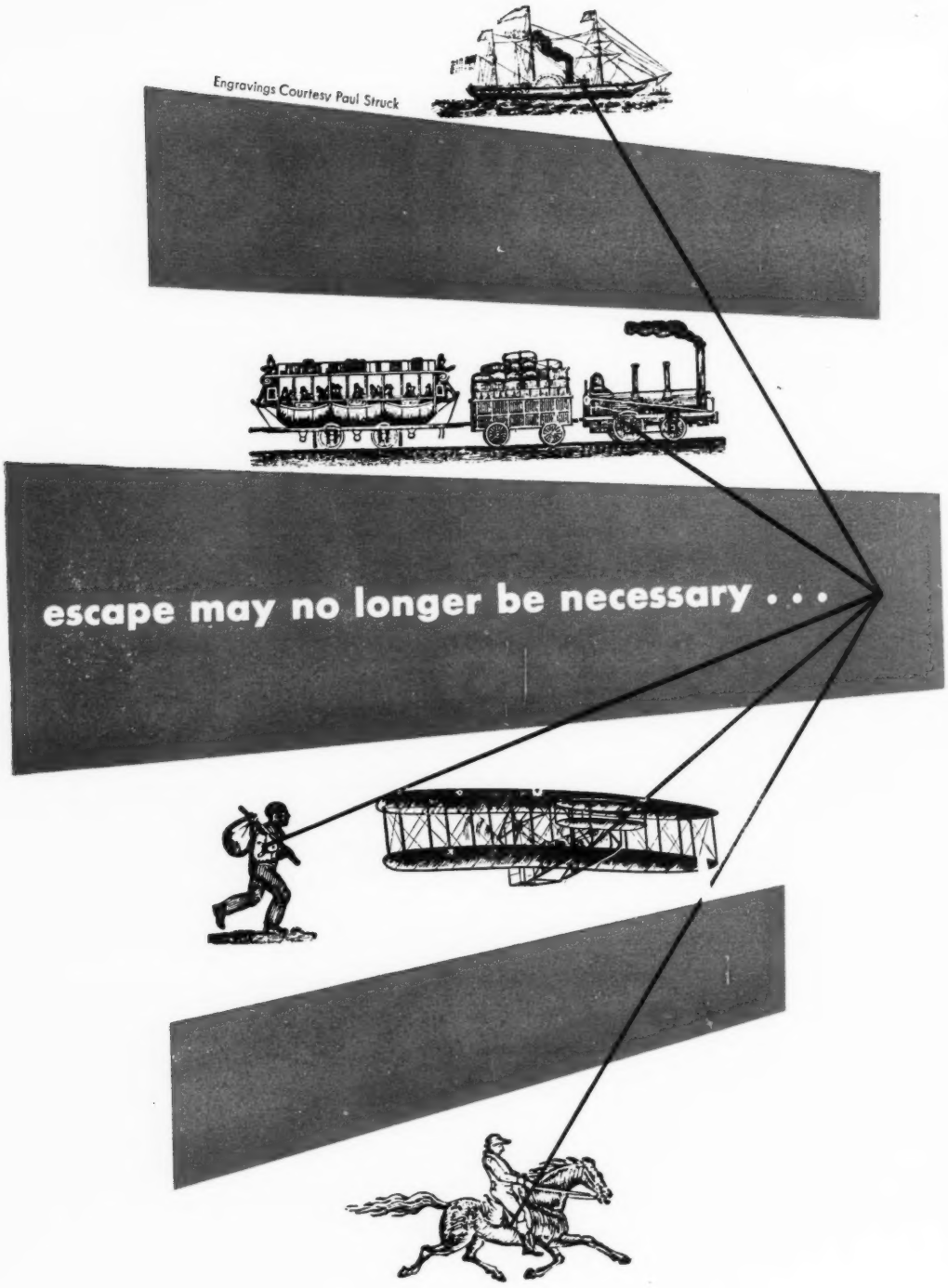
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MANIFESTATIONS OF SOME INTERNAL DISEASES IN THE FUNDUS OF THE EYE

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JACKSONVILLE

There is doubtless no structure in the body that reflects so frequently and so definitely such a great variety of diseases affecting the body generally as does the eye. It is only natural, therefore, that the great improvements of recent years in the ophthalmoscope have tended to unite general medicine and ophthalmology more and more closely. It has often been said that the ophthalmologist is merely a specialist, but he is, and of necessity must be if he really wishes to fill his place, a general physician just as much as is the general practitioner. Von Graefe, the father of ophthalmology, wisely magnified the value of a solid knowledge of general medicine. Today, ophthalmology along with other specialties follows the movement back toward general medicine and its fundamental problems. The study of the various manifestations within the eye which reflect faithfully internal disease is both timely and profitable.

ACUTE INFECTIOUS DISEASES

In acute infectious diseases and in such protracted infections as typhoid fever, optic neuritis with reddening of the disk, injection of the small vessels about the periphery and blurring of the margins of the disk may be present. Rarely, there is involvement of the choroid.

GENERAL BACTERIAL INFECTIONS

The changes in the retina occurring in general bacterial infections and as complications of septic processes may be illustrated by the small lenticular or round retinal hemorrhages, usually punctuated by a yellowish central clot, which are observed in subacute endocarditis. These are as significant as the petechiae which appear in the conjunctival mucosa or in the skin of the body. They are present in from 30 to 40 per cent of the cases. The rare complication of embolism of the central artery may account for the sudden blindness which sometimes occurs in these cases.

SYPHILIS

In syphilis, the eye is so frequently affected that its careful inspection is of equal importance with examination of the skin, the heart and the nervous system. Choroiditis or chorioretinitis occurs in from 10 to 15 per cent of all cases and in as many as 75 per cent of all cases of congenital syphilis. Optic neuritis and papilledema are usually conspicuous manifestations of acute meningitis and meningoencephalitis of neurosyphilis; they occur most frequently in the secondary stage. Gumma of the optic nerve is rare. The primary optic atrophy of tabes dorsalis is always to be looked for as a late manifestation. Gummatous lesions of the retina do occur, but very seldom. The characteristic changes in syphilis consist of multiform small and large areas in which the pigment epithelium of the retina is atrophied and there are accumulations of pigment in the various areas.

TUBERCULOSIS

Tuberculous manifestations in the fundus usually occur in the form of elevations upon the choroid, but may be present in the retina by extension from other parts of the eye. Miliary tubercules scattered through the retina and choroid have been reported by many authors. They are seen (1) as a part of an acute general miliary tuberculosis, an extremely rare occurrence; (2) by extension to the retina from other parts of the eye, especially from the ciliary body and from the optic nerve head; (3) as part of a choroidal tuberculosis; (4) as a purely retinal affection; and (5) as a tuberculous periphlebitis of the retina.[1]

The choroiditis caused by tuberculosis is somewhat similar to syphilitic choroiditis and, singularly

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enough, often attacks persons apparently in perfect health. A small pale area, often adjacent to a blood vessel, may mark the beginning of the isolated lesion. Other tubercles may form, coalesce, heal and recur, or there may be present from the onset a large conglobate tubercle. The relatively slight pigmentation about the lesion and the faint phosphorescence from the thick vitreous opacities aid in the diagnosis.[2]

INTOXICATIONS

The peculiar significance of the optic neuritis resulting from intoxications of various kinds need not be stressed. Instances of blindness and impaired vision following the therapeutic use of arsenicals and quinine, and poisoning by methyl alcohol and tobacco have been made widely familiar.

HEMOPOIETIC DISEASES

Likewise, the varied changes that may appear in the retina in connection with diseases of the hemopoietic system need little emphasis. In erythremia, engorgement and tortuosity of the veins of the retina are typical, and chlorosis has been held responsible for papillitis. Retinal hemorrhages, sometimes accompanied by white spots of exudate, occur in the secondary anemias and are a prominent sign in pernicious anemia. Engorged, pallid veins, hemorrhages and edema of the disk characterize leukemia, and extensive hemorrhagic retinitis accompanies purpura hemorrhagica. Great loss of blood leads to amblyopia or amaurosis and may be followed by bilateral optic atrophy. Severe ocular symptoms rarely follow traumatic hemorrhage, as in war injuries, but most commonly result from intestinal or uterine hemorrhage. The disks are hazy at first, later becoming atrophic, with constricted vessels.

DISEASES OF THE HEART

The role of vascular changes in the retina in cardiac disease is well explained by Yater[3] and Yater and Wagner.[1] They studied a series of 137 cases during life and at necropsy, which included cases of chronic rheumatic endocarditis, and diseases of the heart due to hypertension, coronary arteriosclerosis with or without hypertension, syphilitic aortitis with aortic regurgitation and hyperthyroidism. When hypertension alone was the cause, in 96 per cent of the cases changes characteristic of the disease were noted in the retinal arterioles, indicating the importance of retinal examination especially in those cases in which the blood pressure has returned to normal. Here the retinal findings may constitute the final diagnostic criterion, they observed. In 92 per cent of the cases in which the cardiac disease was caused mainly by coronary arteriosclerosis, retinal vascular changes of the hypertensive type or of the senile fibrosis type were present. The significance of this high percentage of retinal diagnostic evidence is more fully appreciated when it is recalled that in approximately half of all cases of hypertensive disease of the heart coronary arteriosclerosis develops.

These authors found that, in their series, the fundal picture gave help in diagnosis only in cardiac disease due to hypertension and coronary arteriosclerosis, and in subacute bacterial endocarditis. They concluded that retinal arteriosclerosis in the presence of cardiac disease indicates that the disease is caused by hypertension or coronary arteriosclerosis, or both, in the absence of specific evidence of other causes; and that, if the retinal changes are of the type that is merely an accompaniment of old age and if clinical evidence of another cause is lacking, the cardiac involvement probably arises from coronary arteriosclerosis alone. If neither type of vascular retinal change is present, in their opinion the chances are against hypertension or coronary arteriosclerosis being the etiologic factor. They observed that the presence of retinitis or neuroretinitis in cases of cardiac disease adds gravity to the prognosis and indicates a shorter duration of life.

The only other form of cardiac disease in which these authors found retinal examination of diagnostic value is subacute bacterial endocarditis. The characteristic manifestations in this disease are described in a foregoing paragraph as illustrative of fundal involvement associated with general bacterial infections and as complications of septic processes.

ARTERIOSCLEROSIS

The ophthalmoscope offers a remarkable opportunity to study the detailed structure of blood vessels. In the eye more clearly than elsewhere in the human body, the small arteries and arterioles may be observed during life. At present it is generally accepted that reactions visible in the retinal vessels furnish a fair guide to the nature, if not to the degree, of the reactions taking place in the arterioles throughout the organs and tissues of the body, especially the kidney, the spleen, the

brain and the pancreas. Disease of the finer vessels is, however, apparently scattered through the body in somewhat irregular fashion.

Arteriosclerosis and retinal hypertension are so often combined that the association deserves the most careful consideration. Indeed, the early recognition of arteriosclerosis is extremely important for it is often associated with the most serious forms of hypertension. This aging process can usually be detected first in the central artery of the retina in persons past 45 years of age, and one must bear in mind that the process is the same in other vessels of similar size.

Bedell[2a] described the characteristics of hypertensive retinitis as edema, usually greatest where the retina is thickest, which is generally on the nasal side of the disk, and a few or many hemorrhages, combined with whitish, gray, soft masses as a rule near the major vessels. Ultimately, as the hemorrhages increase in number, there are more and larger snowbank masses, and there is greater swelling of the nerve head. If the patient survives, the edema, the hemorrhages and the exudates often subside almost completely. The dark chocolate brown spots which then appear near the posterior pole are of serious import, indicating impending dissolution.

It may take these fundal manifestations a decade or two, or even more, to pass through their cycle, but during this variable period the vessels have undergone the changes which make sharp distinction between the arteriosclerosis and the hypertension practically impossible. Displacement and indentation of veins and sometimes a dilatation of the vein between the arterial constrictions are early signs of both, as are also an increasing visibility of the wall of the artery and a coppery reflex, later becoming silvery gray and eventually a white streak. It may be that the entire arterial tree will straighten and contract, or the reverse may occur with the arteries becoming more tortuous. In addition, exudates appear, further complicating the picture of arteriosclerosis and hypertension. Some are yellowish and irregularly placed; others form a circle.[2a]

It surely is of interest to the general practitioner that even in the early stages of essential hypertension it is possible to see the compression of the veins when they are crossed by the tense arteries, although there may be no visible evidence of disease of the wall of the artery. In arteriosclerosis, by ophthalmoscopic examination it may be possible to discover the first definite signs of the disease and to follow, step by step, the progressive alterations that involve the vessels of the fundus. As the disease advances, one may actually see the deviations that take place in the course of the vessels, the narrowing or actual occlusion of their lumina, the appearance of the small hemorrhages, some only pin point in size, along the veins and arteries, and the swelling of the margins of the disk as intracranial tension increases with the elevation of the blood pressure. Too, one may watch the development of the characteristic flat scintillating exudates that radiate about the macula, and be warned of the terminal stages of the disease by the appearance of white, fluffy exudates throughout the retina.

Infections of the nasal sinuses and teeth, and local inflammatory processes in other parts of the body may cause a toxic retinitis or choroiditis to become engrafted on the arteriolar process.

HYPERTENSION OF PREGNANCY

In the hypertension of pregnancy an important duty rests with the ophthalmologist, and his decision may mean the life of the mother or of both the mother and the child. Upon ophthalmoscopic examination of retinitis in pregnancy often rests the decision as to viability of the child, the organic integrity of the mother's vision and prognosis as to life. A timely therapeutic abortion may spare the mother irreparable damage to her eyes and also severe injury of the arteriolar system.[5, 6]

In a survey to determine the frequency and to learn the opinions concerning the relative value of fundal examination in the hypertension of pregnancy, Hallum[7] learned that 85 per cent of department chiefs of 69 medical schools of the United States and Canada believed this examination helpful in its management, that in 75 per cent of these institutions this study is performed routinely, that 50 per cent of the chiefs requiring this routine examination regard the information gained as important as, or second only in importance to, the value of blood pressure determinations, and that in 40 per cent of the departments study of the eyegrounds in patients with hypertension during pregnancy is required training for house officers. He was of the opinion that the fundus probably offers the best single indicator of the severity and the progress of the toxemia.

The retinopathy is caused by changes in the arterioles. Localized and generalized spastic constriction of the arterioles characterizes acute hypertensive true toxemia of pregnancy, it is now

agreed, and the degree of the constriction closely parallels the severity of the toxemia. The degree of spasm of the retinal arterioles may be regarded as indicative of the degree of angiospasm in other parts of the body. Routine examination of the fundus during the early months of pregnancy to determine the status of the arterioles aids in the prognosis of the present pregnancy and will be of value in interpreting changes associated with toxemia, if it occurs later. During late pregnancy, when hypertension and other symptoms indicate toxemia, fundal examination should be made every few days, and special attention should be given to the degree of angiospasm. When the angiospasm increases in degree despite conservative medical treatment, termination of the pregnancy prevents permanent damage to the mother's vascular system. In some instances the induction of labor is life-saving both for the mother and the child. Hallum[7] concluded that a study of the eyegrounds is probably the most consistently reliable single guide in determining when pregnancy should be terminated and also a great help, in the absence or scarcity of changes, in determining when pregnancy may safely be allowed to proceed.

NEPHRITIS

The present incomplete knowledge of nephritis or Bright's disease has hampered the extensive investigations made into its direct relation to changes in the fundus oculi and into the participation of arteriosclerosis in the production of some of the lesions observed during the course of certain forms of this disease.[8] In acute forms of hemorrhagic or diffuse glomerular nephritis, such as those which follow scarlatina or tonsillitis, only occasionally are hemorrhages and small exudates observed in the retina. The margins of the optic disks are sometimes blurred; the arteries and veins often appear tortuous, and edema of the retina occurs with remarkable regularity.

The origin of the acute retinitis in nephritis is not altogether clear. It is usually associated with infection due to hemolytic streptococci, sudden and pronounced rise in both systolic and diastolic blood pressure, and subcutaneous edema generally ascribed to the effect of a toxin upon the blood vessels; any of these factors, acting alone or in combination, might, therefore, be held responsible. In favorable cases, the retinitis disappears as the patient recovers.

The edema of the retina may be interpreted as a part of the generalized edema so characteristic of this disease. Receding more slowly, however, or detected more readily, it continues to be observed long after all signs of edema of the subcutaneous tissues have vanished. This retarded retrogression, therefore, forms a delicate index of complete recovery from this symptom in this form of nephritis.

If acute glomerulonephritis progresses to the active or nephrotic stage, the edema of the retina may increase. Uncomplicated, nephritis of this type may even reach the terminal stage without producing further damage to the retina or choroid, other than an occasional small exudate or hemorrhage. Frequently, however, particularly in association with persistent hypertension of high degree, varying grades of choked disk are noted, and extensive hemorrhages and exudates are observed in the retina. When arteriosclerosis complicates glomerulonephritis, the most pronounced forms of hemorrhagic and exudative lesions occur in the retina with extreme grades of choked disk.[2b]

In the nephrotic forms or nephrotic syndrome, the blood vessels are spared injury, and the blood pressure is not elevated. In uncomplicated instances there are no hemorrhages, exudates, or vascular changes in the retina. Edema sometimes involving the margins of the disks may be the only alteration in the fundus.

Nephrosclerosis, the arteriosclerotic form of nephritis, is often accompanied, early in its course, by the most astonishing changes in the fundus. Here one may observe all phases of arteriolar disease, from the early narrowing of the vessel with compression at the arteriovenous crossing to complete occlusion of branches of retinal and choroidal vessels. Hemorrhages and exudates of all types are common, and the most extreme grades of edema of the nerve head occur.

Unraveling the entangled causes that operate to produce these complicated pictures in the fundus in the various forms of nephritis is especially difficult. Undoubtedly, arteriosclerosis plays a predominant part.

DIABETES MELLITUS

In diabetes mellitus, it is often difficult to determine to what extent the extensive changes in the fundus oculi are due to the disease itself or to complications or concomitants. The pathologic changes, which are usually bilateral, occur in the area between the upper and lower temporal vessels of the retina and in the region surrounding the optic nerve head. Early, numerous small round deeply situated hemorrhages present themselves,

and in addition, there are usually small exudates. This is accepted by most ophthalmologists as the characteristic lesion of the retina in diabetes and constitutes diabetic retinopathy.[1b]

This form of retinopathy is usually chronic and progressive. It may start insidiously as simple small deep round hemorrhages with small groups of chronic small exudates forming later in the macula and foveal region. The latter, as time goes on, may become larger and more massed, seriously interfering with central vision. In many instances sclerosis of the larger veins occurs, with extravasation into the retina of large hemorrhages. As these hemorrhages recur, they may at times break through into the vitreous body, with organization taking place and formation of gross scar tissue, the so-called retinitis proliferans.

It is important for all physicans to remember, however, that diabetes may be severe, continue for years and eventually cause the death of the patient without producing retinitis. On the other hand, the hard yellow deposits near the disk or macula combined with small striate or globular hemorrhages present a fundal picture that may be the first visible evidence of abnormality and may lead to investigations that disclose the correct diagnosis.[2a]

INTRACRANIAL LESIONS

In the presence of intracranial lesions, ophthalmoscopic examination commonly reveals pathologic changes. These manifestations, while suggestive, cannot, however, in any individual condition be considered pathognomonic. For example, a more or less constant ophthalmoscopic picture is that of papilledema or optic neuritis; yet it is never possible to make a diagnosis from this manifestation alone. The ocular symptoms are of diagnostic value only when the optic neuritis or choked disk is considered in conjunction with the general physical manifestations in the case.

If a careful history is taken, it is usually possible to distinguish choked disk from optic neuritis. In neuritis, the first complaint is loss of vision, then field restriction and finally changes observed ophthalmoscopically. In contrast, choked disk is frequently discovered in the course of routine search for the cause of general symptoms such as headache; the changes in the fields and the visual loss are then revealed.[2a]

The importance of the identity between the retinal arteries and the cerebral arteries may well be stressed. The vascular plexus of the retina visible by means of the ophthalmoscope is in reality a cerebral plexus. Like the cerebral arteries, the central artery of the retina is a terminal artery without anastomoses. In the eye as in the brain, arterial obstruction, either by thrombus or by embolus, causes extremely serious functional disturbances. Ophthalmoscopic examination of the trunk and branches of the central artery of the retina, taking into account their caliber and the condition of their walls, may be considered equivalent to an examination of the cerebral arteries and indicates the importance of this examination in vascular pathology.[9, 10]

SUMMARY

The fundus oculi furnishes evidence of internal disease in numerous instances. Ophthalmoscopic examination should be carried out routinely in acute infectious diseases, general bacterial infections, syphilis, tuberculosis, intoxications of various kinds, hemopoietic diseases, diseases of the heart, hypertension of pregnancy, arteriosclerosis, various forms of nephritis, diabetes mellitus and diseases producing increased intracranial tension.

The ophthalmologist gains accurate information concerning the manifestations of internal disease in the fundus only through many years of study and experience. The clinician and the surgeon qualified through training and experience to interpret and evaluate these changes are at a great advantage. In so far as the special field of ophthalmology is related to general clinical medicine, every general practitioner should be alert to the value of ophthalmoscopic examination. On the other hand, the ophthalmologist should acquaint himself with all of the clinical facts in a case before he undertakes to make a diagnosis based largely upon examination of the fundus oculi.

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DISCUSSION

DR. WILLIAM C. BLAKE, Tampa: I am sure all have enjoyed Dr. Knauer's paper and his beautiful slides. It might appear unusual for an internist to discuss a paper on ophthalmoscopy, and yet the specialist in every field of medicine must of necessity be interested in the ocular manifestations of systemic disease. The more the oculist knows about the diseases of the human body which are capable of producing change in the retina, the more skillful he becomes in his work, and the sounder is his counsel and guidance to the patient. It is a necessary corollary that the more skillful the internist is in recognizing changes in the retina the better able he is to evaluate the scope and severity of the disease producing these changes.

I do not propose to discuss Dr. Knauer's paper as a whole because the list of diseases capable of producing retinal manifestation is myriad but I will comment briefly on a few of the commoner conditions encountered and the value of retinoscopy in general medicine.

The eye forms a window through which one can study minutely under high magnification the vascular tree down to its finest ramifications. The state of these arteries, with some reservations, forms an index to the state of the arteries of the body as a whole. Particularly is this observation true of cerebral arteries. Vascular disease, with its various complications, has become of increasing importance during recent decades due to the increased longevity of the human race and the tempo of life under the present civilization. A visual knowledge of the state of the arteries of the eye becomes therefore of increasing importance. No case of cardiovascular disease has been properly studied and evaluated without an ophthalmoscopic examination and an estimate of the degree of arteriosclerotic changes which have taken place. Dr. Knauer described in minute detail the visual evidence of these changes. I shall not, therefore, attempt to comment on them, but merely wish to stress their importance.

Who has not tried earnestly to determine the prognosis in a case of hypertension? It is freely admitted that many factors enter into the etiology of this condition, but if the retinal arteries are normal in appearance, other factors being equal, the prognosis is good. On the other hand, given a patient with hypertensive disease who otherwise appears healthy, but in whom these arteries are found tortuous or elongated, show the broadened light reflex, compression of arteriovenous crossings, or the silver wire appearance of extreme arteriosclerotic change, this patient has a very poor prognosis regardless of his age and regardless of the degree of hypertension.

Many conditions of the eye have their etiologic factor in diseases having their origin in parts of the body far removed from the eye. Notably is this true in diseases of the kidney, the brain and certain metabolic diseases. This is exemplified by the degenerative changes such as patchy exudate and edema or hemorrhage characteristically seen in certain stages of nephritis and diabetes mellitus. There is little wonder that the patient who consults an oculist leaves his office astounded when he is told that he has either diabetes or Bright's disease. I have had patients come into my office in a state of complete awe, inquiring on what grounds such a diagnosis could have been made. On the other hand, the internist who has made such a diagnosis has not properly evaluated the severity of the disease unless a retinal examination has been made. The presence or absence of these changes furnishes important prognostic implications, and their progression or recession is an important guide as to the course of the disease and the efficacy of treatment.

Headache, while a common symptom and one resting on many etiologic factors, occasionally denotes some serious lesion of the brain such as tumor. The symptomatology may be bizarre or indefinite, but if the optic disk is swollen and its margin indefinite and blurred, an immediate key to the diagnosis is furnished. If ophthalmoscopic examination is routinely made in such cases, fewer cases of tumor of the brain will be missed and more will be brought to operation during an operable stage.

I should like to emphasize the need for a closer relationship between the ophthalmologist and the internist or the general practitioner of medicine and to stress the fact that the retina furnishes a mirror through which the physician can see evidence of disease in the human body. A closer working relationship between the two would be mutually helpful and allow both to render better service to their patients.

DR. CARL E. DUNAWAY, Miami: Dr. Knauer's paper brings out graphically the necessity of being thoroughly familiar with the use of the ophthalmoscope in examination of the fundus of the eye. Many competent internists have already familiarized themselves with this instrument.

I should like to mention the case of a pilot who flies for one of the national air lines. This patient came to me complaining of soreness in the right eye. There was nothing externally to indicate why the eye was painful. The vision was 20/20 in both eyes. Tension was normal, and the ophthalmoscopic examination revealed blurring of the disk margins. A diagnosis of neuroretinitis with papillary edema was therefore made. This man was flying to New York and back twice a week, but was advised not to fly after this examination. He may expect to live longer because that ophthalmoscopic examination was made.

Life expectancy frequently may be determined by the condition of the blood vessels in the eye. Too, examination of the eyegrounds often indicates whether or not to terminate a pregnancy.

I believe that Dr. Knauer has presented an especially timely paper and one which interests all physicians as well as oculists. He should be congratulated on the masterful way in which he has handled the subject.

DR. F. K. HERPEL, West Palm Beach: It seems to me that Dr. Knauer has chosen an especially important subject. The value of this type of examination as an assistance in arriving at an accurate diagnosis and prognosis cannot be stressed too much.

I had the privilege of serving as medical director of an induction station for a year or so during the recent war, and in my experience no consultant was of as much importance day by day as the trained, untiring ophthalmologist. More than anyone else he furnished what I needed to know. It was a daily occurrence that the final opinion as to acceptance or rejection of an inductee depended upon the ophthalmologic examination of the patient. This settled the problem in the cases which were considered borderline so far as hypertension was concerned. The arterial examination and determination of blood pressure left the examiners considerably in doubt as to whether the candidates for induction actually had hypertension or one of those borderline emotional elevations in blood pressure. It was surprising to note the accuracy with which the ophthalmologic report fitted in with later studies of these patients. I was severely criticized many times for rejecting patients who had been accepted otherwise for military service. I kept my eye on the ophthalmologist's report and took every possible

opportunity to go back and see these patients as they were checked and rechecked.

I think the number of retinoscopic examinations ranged between 75 and 125 per day at my station. It was possible for the examiner to do that amount of retinoscopy in conjunction with other work only because I had an untiring worker with me. The public has been greatly benefited through the services of such men scattered throughout the examining stations. These ophthalmologists serving both on a full time and part time basis performed what I consider an outstanding service.

I certainly enjoyed Dr. Knauer's paper and I hope at some future time he may present additional findings on this subject.

Dr. Knauer, concluding: I desire to thank the doctors for their discussions and Dr. Blake for bringing out the relationship between the ophthalmologist and the internist. By working together they can do a great deal for each other.

I also am obliged to Dr. Dunaway for bringing out the point of toxemia in pregnancy. I did not have time this morning to present that phase of the subject in the fifteen minutes allowed, but in the published paper appropriate mention of it will be made. I have some excellent slides on the toxemias of pregnancy.

I appreciate the remarks of Dr. Herpel and wish to thank him for emphasizing the value of retinoscopy in hypertension. A paper on this subject would be of particular interest.

OSTEITIS CONDENSANS ILII

Report of Three Cases Associated with Urinary Infection

MARTIN C. SZABADOS, M. D.
TALLAHASSEE

A sclerosing lesion of the innominate bone in the region of the posterior inferior spine, just laterally from the lower end of the sacroiliac joint, is designated in the literature as osteitis condensans ilii. It is often bilateral and occurs almost exclusively in women. The consistent peculiar localization of this affection was noted by Yeoman[1] in 1928. Yet today, neither the enigmatic localization nor the pathogenesis of the affection is understood.

Five cases of osteitis condensans ilii have come under my observation. In 3 cases an associated chronic or recurrent infection of the urinary system was well observed. In 2 cases the patient gave a history of pyelitis and submitted to intravenous pyelography, but evidence of urinary infection was not found. These cases are not strictly included in this series. The remaining 3 cases seem to have bearing upon the infectious theory of this affection of the bone.

One case is particularly interesting from the viewpoint of the infectious theory because in this case a second focus, namely, condensing osteomyelitis (Garre) of the right femur, was also present together with condensing osteitis of the right innominate bone. This is the first such case reported in the literature. In the second case, which was severe, nephrectomy for pyonephrosis had been performed. In the third case, the patient had had an operation for nephrolithiasis and suffered with purulent pyelitis.

Hare and Haggart[2] of the Lahey Clinic made a comprehensive review of osteitis condensans ilii. They did not note the association of any significant infection in a series of 24 cases. These outstanding authors concluded that interference with the blood supply of the bone due to trauma, usually at childbirth, is the most likely cause of the disease.

The great chronicity in these cases is most surprising. The duration of the affection, as judged by the history, may be from three to twelve years.[2] If condensing osteitis of the ilium is not a traumatic affection but represents a secondary infectious focus, the primary infectious focus long may have healed without trace, unless it became chronic. From the viewpoint of an infectious theory to explain the etiology of condensing osteitis of the iliac bones, which theory gained support by the work of Rendich and Shapiro,[3] the finding of 3 cases of proved association of urinary infection with the bony lesion is important.

The association of chronic urinary infection and condensing osteitis of the ilium is not a coincidence. The ureters are related posteriorly to the sacroiliac joints and to the region of the bony lesions. A nutrient foramen in the vicinity of the bony affection was pointed out by Rendich and Shapiro.[3] Although these authors were alert for an associated infection, they reported none in their series. It is suggested that due to the anatomic relationship of the ureters to the bony lesions, a descending urinary infection may have entered the bone through the nutrient foramen nearby. The often bilateral pyelitis would explain the often bilateral occurrence of the bony lesion, and the mentioned anatomic relationship of the ureters would account for the peculiar localization bilaterally. The prevalence of the lesion in women is accounted for by pyelitis.

Acute infectious diseases accompanied by bacteremia and bacteruria often result in transitory acute infections of the urinary system. Such acute pyelonephritis can be at the root of some bone infections. The bone infection becomes

From the Department of Roentgenology, Baptist Memorial Hospital, Tallahassee.

chronic while the acute urinary infection becomes chronic only in a minority of cases. This train of thought would account for the fact that an infectious focus was not found in the series of cases of osteitis condensans ilii which were reported previously by others.

At autopsy in cases of chronic pyelonephritis the ureters show catarrhal, purulent, hemorrhagic or gangrenous changes paralleling the changes observed in the pelvis of the kidney. The wall of the ureter can be thickened, the lumen narrowed or dilated. Finally, periureteral changes can be present. The thought of infection descending to the ilium is a pathologic possibility.

While this concept is based upon the anatomic relationship of the ureters and the affected bone, a somewhat similar anatomic relationship was adduced by Graff[4] to explain the frequent occurrence of acute left-sided sacroiliac arthritis following resection of rectal carcinoma. This author succeeded in proving by autopsy the ascent to the joint of a perisigmoid lymphangitis. It is to be recalled that the sigmoid is related posteriorly to the left sacroiliac joint.

There follows a description of 3 cases of osteitis condensans ilii associated with chronic or recurrent urinary infection. This association in these cases is proved by contemporary observations. Two additional cases of osteitis condensans ilii in which there was a history of pyelitis, but in which intravenous pyelography gave no evidence of actual urinary infection, are not described.

Fig. 1A.—*Osteitis condensans of the right innominate bone. There was also sclerosing osteomyelitis (Garre) of the right femur* (fig. 1B). *The chronic pyelitis in this case had an insidious onset. The time relationship between the urinary infection and bony lesions is not known.*

REPORT OF CASES

Case 1.—The following data were obtained through the courtesy and from the records of Dr. G. H. Garmany, and also from Dr. F. T. Holland, both of Tallahassee. The patient was also interviewed.

A 27 year old white housewife had had two normal deliveries and one forceps delivery with uneventful postpartum periods. Besides some acute exanthems, she had had colitis in childhood and also pneumonia. When she was 14 years of age a bone disease of the right thigh had set in with sudden onset, and she had been severely sick for two or three weeks with slow convalescence. She had experienced great pain in the right thigh during this early period and since then she had suffered chronically although acute exacerbations had not been experienced. The course of the fever is not known. In 1942, the disease of the bone had been diagnosed as sclerosing osteomyelitis (Garre) by Dr. O. W. Britt, radiologist of Tallahassee.

In 1939 she had noticed that she tired easily and that she lost energy for work, experiencing drowsiness and headache for some weeks. Finally she had required treatment, and the disease had been diagnosed as purulent pyelitis by Dr. L. W. Blake of Bradenton. She had been treated in bed for two weeks at that time.

She had been treated for urinary infection again in October 1946 by Dr. Holland, upon referral by Dr. Garmany, her complaints then being frequency of urination and hematuria. According to the patient, treatment with sulfa drugs had greatly ameliorated the condition, and she had declined cystoscopic examination. This course of events was confirmed by the urologist. The exact onset of the original urinary infection cannot be determined, but it was insidious, and the pyelitis in 1939 was probably chronic.

In November 1946, the right thigh and lumbosacral region were studied roentgenologically. At that time the patient complained of pain in the right thigh on weight bearing and great tenderness of the skin on touch. Also, she reported attacks of low back pain related to stooping and work. This pain was relieved by rest and was not aggravated by coughing or sneezing. The pain did not extend over the back of the thigh.

Fig. 1B.—*Chronic osteomyelitis of the right femur associated with osteitis condensans ilii* (fig. 1A). *This association tends to indicate the identical nature of the two lesions.*

The patient's weight was 130 pounds, and the height was 61 inches. The physical examination gave negative results with the following exceptions: The uterus was retroverted and impacted, firm and somewhat enlarged. There was a swelling over the medial aspect of the right thigh, over which the skin was not discolored. This swelling was painful on palpation. Motion was limited in the knee joint, straight leg raising was not painful, and the glutei were tender.

The Kahn precipitation test gave negative results. Routine blood counts and urinalysis also gave negative results. The blood pressure was 120 systolic and 72 diastolic.

Roentgenologic examination showed a sclerosed area about 1 inch in diameter in the region of the posterior inferior spine of the right innominate bone (figs. 1A and 1B). The eburnated area did not extend to the sacrum, and the sacroiliac joint was not narrowed.

The lower half of the right femur showed thick sclerotic new bone. The apposition was on the periosteal surface of the cortex; there was no encroachment upon the medullary canal. The lesion had the appearance and history consistent with sclerosing osteomyelitis (Garre). Comparison of the roentgen studies of this lesion with those made four years previously indicated that the affection was stationary.

Case 2.—A white woman aged 45 was referred to me at St. Francis Hospital, Kewanee, Ill., by Dr. N. J. Bell for roentgen examination. She complained of incapacitating low back pain of four weeks' duration and stated that she had had similar bouts of low back pain previously, for several years. She was the mother of two children.

Her right kidney had been removed twelve years prior to this examination. She was chronically ill and under almost constant treatment for infection of the remaining left kidney. She was also debilitated because of Trichomonas infection. She was pale with wasted adipose tissue.

On physical examination, the organs of the chest were normal. The blood pressure was 100 systolic and 70 diastolic. Abdominal palpation of the left kidney elicited pain. Internal examination was not possible because of painful mucosa. Deep palpation of the pelvis gave negative results.

Laboratory examination revealed secondary anemia with a hemoglobin estimation of 60 per cent and a red blood cell count of 3,200,000. The white blood cell count and the differential count were normal. The sedimentation rate was 30 mm. per hour. Catheterized urine showed pyknotic red blood cells with a relatively smaller number of shrunken white blood cells, oval-shaped epithelial cells and traces of albumin.

Later, on account of certain roentgen findings, an orthopedic examination was made by Dr. Bell. The sacroiliac notches were tender on both sides, and the straight leg raising test showed restriction bilaterally. The remaining orthopedic data were irrelevant.

Roentgenograms showed large sclerotic areas of the innominate bone bilaterally, adjoining the lower portion of the sacroiliac joint (fig. 2). The osteitis did not extend to the sacrum. The joint space could not be made out because of overlapping dense shadows. It is impossible to state that the cartilage was not affected by the eburnation of the underlying bone.

Case 3.—A 66 year old white woman was admitted to St. Francis Hospital, Kewanee, Ill., with severe chills and fever, under the care of Dr. J. T. Boswell. In 1933, this patient had been examined in this hospital, and kidney stones were found bilaterally. She gave a history of an operation for kidney stones one year previous to the mentioned study. She was the mother of five children.

Fig. 2.—*Osteitis condensans ilii, bilateral, an extensive process. The patient had bilateral pyelonephritis. The right kidney was removed twelve years prior to this examination.*

Physical examination gave negative results with the exception of pain on deep percussion of the left renal area. The blood pressure was 150 systolic and 100 diastolic.

Several examinations of the urine gave negative results. The fifth specimen contained 200 white blood cells per microscopic field, and subsequent urinalyses indicated gradual decrease of the pus cells in the urine. Other laboratory data, serologic tests and smears gave no evidence of bacterial or malarial infection.

Roentgenologically, a large pea-sized stone shadow was seen in the region of the left kidney (fig. 3). In the pole of the right kidney a smaller stone shadow was evident. Condensing osteitis of the left iliac bone was present. The ilium showed the greatest density at the lower end of the sacroiliac joint. The joint space was visible. The condensing process did not extend over the joint cartilage to the sacral bone. The contralateral sacroiliac region showed indistinct joint space and some loss of bony detail. The lumbar spine showed mild hypertrophic changes of the vertebral edges.

Fig. 3.—*Osteitis condensans ilii of the right innominate bone in a woman who had attacks of nephrolithiasis and purulent pyelitis, with a surgical operation for stone colic. Kidney stones are evident bilaterally.*

SUMMARY

Three cases of osteitis condensans ilii are presented. In these cases there was an associated urinary infection. In 2 cases the urinary infection required surgical operation. Similar case reports have not been published. It is suggested that the infection of the renal pelves may descend and may cause ureteritis of the same severity as that of the pelvis of the kidney. The periureteral lymphangitis may reach the ilium through a nutrient foramen, which is observed in the vicinity of this bone lesion with great frequency.

The often bilateral and symmetric occurrence of the condensing osteitis of the ilium and, further, the persistent localization of this bone affection in the two areas over which the ureters descend can be understood by the aid of this concept of infection.

The majority of cases of osteitis condensans ilii are unassociated with manifest urinary infection at the time of the roentgenologic examination. Acute urinary infections, which are often observed during acute infectious diseases, can be at the source of this type of case. Acute urinary infections may pass unnoticed; chronic infections may be latent.

The infectious theory of osteitis condensans ilii gained momentum by the observation of a possible port of entry, namely the nutrient foramens near the sclerotic foci of the innominate bone. The evidence on the side of the infectious theory is now possibly augmented by the anatomic relationship of the ureters to the region of the affected bone. In connection with the infectious theory, the occurrence of a case of osteitis condensans ilii showing an additional chronic osteomyelitic focus in the right femur seems to be of particular interest.

In the illustrative cases reported the great chronicity of the urinary infection is noted. When chronic pyelitis and pyelonephritis occur, the time of onset seldom can be established because of the insidious course with apparently latent periods. The time relationship between the urinary infection and the chronic osteitis of the innominate bone could not be determined in the cases described.

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CHRONIC URETHRITIS IN WOMEN

AN IMPORTANT CLINICAL ENTITY

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Chronic nonspecific urethritis is a condition frequently observed in women. Although causing much and prolonged annoyance, and even disability, it apparently has not received the attention that it deserves. Patients may suffer for as long as twenty-five to fifty years from unduly frequent, urgent and painful urination. In addition, there are many other symptoms, the cause of which is often misleading; among them are dyspareunia, pruritis vulvae, incontinence of urine, backache, vague pains in the lower part of the abdomen and nervousness. There is no question as to the reality of the suffering among patients afflicted with this condition. The lack of recognition of this important entity arises from its failure to present, in all cases, pronounced local evidence; the urine is usually sterile and the general health may be excellent, except for symptoms due to the urethra. In most cases physical examination fails to reveal any gross pathologic process, so that there is a natural tendency to ascribe the symptoms to "gravel," "acid urine," "cystitis," or merely nervousness. Too often one prescribes a urinary antiseptic, a sedative, or merely a placebo. A better understanding and appreciation of this common malady, and institution of proper therapy often result in relief of this condition, and the patients are justly grateful.

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ETIOLOGY

Chronic nonspecific urethritis is much more common in women than in men. The exact cause is not completely understood, but several factors undoubtedly play a role in its development. The intimate relationship of the urethra and trigone to the vagina and rectum facilitates transmission of organisms from these constantly contaminated passages to the urethra. The urethra is a short, membranous channel, about 3.5 cm. in length, which opens in the roof of the vestibule. The anterior two thirds is lined with squamous epithelium and the posterior one third, which is continuous with the trigone, is lined with transitional epithelium. In addition to the larger paraurethral glands of Skene, there are many small glands and lacunae which open into the lumen of the canal. Any condition which reduces the resistance of the urethral mucosa to disease often initiates the pathologic changes which result in chronic urethritis. Catheterization, coitus, masturbation, parturition, puerperal sepsis, infestation with Trichomonas, [1, 2] abdominal or pelvic survery, radiant energy (radium, roentgen ray), cystitis, pyelonephritis, carelessness in vulvar hygiene, and possibly allergy may be predisposing factors.

Over 95 per cent of the patients have enjoyed coital habitation, which indicates that trauma during intercourse is an etiologic factor. Lower and Roen[3] suggested that contamination other than gonorrhea may be an important source of infection. Burns and I[4] noted that in 86 per cent of our cases the patients had borne children. Ormond[5] and Spence[6] observed that the condition was more common during middle age and in married women. Hunner[7a, b] emphasized the role of distant foci of infection in the etiology of urethral pathologic conditions. He believed that infected teeth, tonsils, paranasal sinuses and possibly lesions in the gastrointestinal tract may produce nonspecific urethritis. Winsbury-White[8] reported results of animal experiments which appeared to show direct lymphatic communication between the cervix uteri and the posterior portion of the urethra and trigone, as well as the upper part of the urinary tract. Folsom [9a] and Walker[10] also demonstrated this possible route of ascending infection and believed that urethritis, trigonitis and possibly pyelonephritis could, by direct lymphatic extension, come from an infected cervix.

PATHOLOGY

Chronic urethritis is generally an end result of acute urethritis. It implies a low grade, long-standing inflammation of the urethral surface. There are round cell infiltration in the submucosa, granulation tissue and periurethral deposition of fibrous tissue, with a more or less edematous, contracted, irregular channel of diminished caliber.

Anatomically, the urethra is located in the erotic zone where sensory nerve endings are numerous and hypersensitive to stimuli. The inflammatory changes in chronic urethritis are limited, as a rule, to the deeper portion of the urethra, the neck of the bladder and the trigone. The changes in the urethral mucosa have much the same appearance as the granulation tissue of chronic posterior urethritis in men. Chronic non-specific urethritis is often termed granular urethritis. The neck of the bladder is irregular and injected, and, as time elapses, inflammatory cystic changes may occur. Surrounding it, villous formation is frequently observed. These polyps, with tenuous, flowing fronds, resemble the fronds of papillomas of the bladder. The polypoid masses are often just within the grasp of the vesical sphincter, which may explain many of the troublesome urinary symptoms. This may be one of the causes of urinary incontinence which is not otherwise explainable. An associate trigonitis is often present, which is thought to be due to subtrigonal lymphangitis. The trigone may also be covered with small, clear cysts. In most cases, contracture of the urethra is a result of infection rather than the cause of it.[11]

In 1853, Virchow[12] described concretions in urethral glands of elderly women and postulated that these may be homologous to the male prostate. Since that time this problem has been a controversial subject.[9,13,14,15,16,17,18,19,20] Recently, Folsom,[9] Caldwell,[13] and others[14,15,16,17] presented convincing evidence concerning the clinical importance of these glands. Burns and I[4] demonstrated definite glandular structures in tissue resected from the neck of the female bladder.

SYMPTOMS

The two outstanding types of symptoms produced by chronic urethritis are irritation of the bladder and pain, which is either local or referred. Diurnal and nocturnal frequency, burning, urgency of urination and a sensation of pressure in or incomplete emptying of the bladder are the chief symptoms referable to micturition. There may be an acute onset of symptoms. Again, there may be a train of symptoms followed by a period of quiescence, only to have the symptoms recur; or the nagging sensation of irritation of the bladder may be constantly present for years. Many of the patients notice that the symptoms either begin, or are aggravated, just before a menstrual period. This onset or exacerbation is probably due to increased congestion of the urethra and trigone at this time.[21] Pain may be manifested by dyspareunia, low backache, pains in the legs, and vague discomfort of the lower part of the abdomen. In several of my cases pruritis vulvae, which had been resistant to all previous therapy, was completely relieved by treatment of the urethra. Ormond,[5b] Van Duzen,[22] Kittredge and I[23] recently showed that incontinence is frequently caused by urologic diseases of the urethra. Patients with true urgency incontinence may be completely relieved by treatment of the urethra. Sacral or lumbosacral backache is a rather frequent symptom among these patients. It is often similar to that due to prostatitis in men; namely, the pain is worse in the morning and is relieved by exertion. Proper treatment of the urethra will relieve the backache in many of these cases.

Chronic urethritis is a relatively common cause of hematuria. The neck of the bladder and the urethra should be investigated in all cases in which other possible sources of bleeding have been eliminated by thorough investigation of the bladder and upper part of the urinary tract. In one series of cases, Burns and I[4] noted that 68 per cent of the patients had been subjected to some form of surgery in the lower part of the abdominal tract. Findings at operation substantiated the fact that in the majority of cases surgical treatment was indicated. In others, however, the patients were apparently operated upon for the referred pain, which originated from the inflamed urethra. These patients' symptoms were not relieved by operation, but were promptly alleviated by treatment of the urethra. Civiale,[24] in 1856, first stated that the urethra could act as a focus for pain referred to closely related or relatively distant parts of the body. Since that time Folsom and O'Brien[9c] and others have demonstrated this conclusion to be true.

There is an old axiom, too seldom followed, that diseases of the urethra must be considered in women, as well as in men, in any obscure complaint located below the umbilicus. It is interesting to note in these cases that nervousness is an

outstanding symptom and one of the chief complaints of many of the patients. Some of these women had been referred for psychiatric treatment and some had even had shock therapy. Nervousness is due, in large part, to the constant, urgent desire to urinate both day and night and to the ever present apprehension that a lavatory will not be available.

DIAGNOSIS

Twinam[11] aptly stated that the female urethra has become only the resting place for the cystoscope in investigating the bladder. Diagnosis of chronic urethritis is first suggested by tenderness of the urethra when the catheter is passed to obtain a specimen of urine. Burns and I[4] have found the urine negative in 95 per cent of cases. The actual diagnosis of urethritis is, however, made by cystourethroscopic examination. The general vesical mucosa presents a normal, healthy, pinkish, salmon color; but, when the instrument brings the trigone into view, a velvety, reddish, congested area is seen. The injection is continuous with the neck of the bladder and the urethra, which usually present an irregular, inflamed, granular appearance. At times the urethral mucosa is velvety in appearance with interspersed longitudinal, whitish bands. In some cases the trigone is covered with a thin membrane, the so-called membranous trigonitis. The neck of the bladder and the trigone are often covered with clear cysts or inflammatory villous polyps. Instead of being a cystitis, as it is usually termed, the condition is, in reality, a urethrotrigonitis, rather a urethral than a vesical affection. The abnormal tightness, either due to spasticity or actual fibrotic contraction, may result in definite obstruction. This may be demonstrated by the presence of residual urine and trabeculation of the musculature of the bladder. In addition to the study of the bladder and urethra in these cases, there should always be a complete urologic evaluation, and pathologic changes in the upper part of the urinary tract should be ruled out by excretory or retrograde urography.

TREATMENT

Paradoxically, the mere diagnosis of chronic urethritis sometimes dramatically relieves the patient of symptoms within a few hours by dilatation of the urethra, incident to catheterization and cystoscopic examination. Distension of the bladder to full capacity also relieves the bladder, which has become accustomed to frequent, urgent urination over a long period of time. When the diagnosis has been established, therapy involves, chiefly, three procedures: (1) irrigation and distension of the bladder; (2) dilatation of the urethra with sounds; and (3) instillation of silver nitrate solution in the posterior urethra. Also, irrigation of the bladder with a bland, mildly bacteriostatic solution, such as 1:8000 potassium permanganate solution, is a safeguard against introduction of infection. Because of cicatricial tissue, resulting from chronic infection, it is essential that the urethra be dilated by passage of sounds up to 28 to 30 F in size. One should begin dilatation with whatever size sound the urethra will comfortably accommodate. If there is congenital stenosis of the external urethral meatus, meatotomy should be performed.

Silver nitrate solution is instilled into the posterior urethra by means of a Keyes instillator. Two cubic centimeters of 0.5 per cent solution is used as an initial instillation, and gradually the percentage of the solution is increased with each treatment to a maximum of 2 per cent in cases in which it is tolerated. Treatment given once or twice a week for a period of four to six weeks affords complete relief of symptoms in about 90 per cent of cases. The remaining 10 per cent fall chiefly into three groups: (1) a few intractable cases of chronic urethritis, which may be treated by direct application of 10 per cent silver nitrate to the urethra and trigone through an endoscope; (2) some cases with long polyps around the vesical sphincter, which require fulguration; and (3) rarely, a case which will not respond to therapy until an infected cervix uteri is adequately treated. In the latter two groups it must be remembered that often fulguration of the polyps and treatment of the cervix do not of themselves relieve the symptoms, as the urethra itself must be treated after the other procedures have been carried out.

SUMMARY

Chronic nonspecific urethritis is a common condition in women. It is characterized by pathologic inflammatory changes in the urethra, neck of the bladder and vesical trigone, which appear granular on inspection. Chronic urethritis may be the cause of many annoying urinary symptoms and pain, either local or referred. The diagnosis is not difficult if complete urologic studies are made in suspected cases. The disease can be

cured within four to six weeks by irrigating the bladder, dilating the urethra with sounds and instilling solutions of silver nitrate into the posterior urethra. It should be remembered that after the inflammation has been cured, predisposing factors may be responsible for recurrence.

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HOSPITAL CASE REPORTS

HANOT'S CIRRHOSIS*

A 36 year old white man entered the hospital with a history of alcoholism of ten years' duration, after an alcoholic bout of ten days without food. His temperature was 102.4 F., the pulse rate was 120, and the respiration rate was 40. The blood pressure was 125 systolic and 80 diastolic. He was dehydrated and emaciated. Coarse rales were present in the base of the right lung, and the edge of the liver reached the crest of the ilium. He died six hours after admission with the clinical diagnoses of acute alcoholism (impending delirium tremens), hepatic decompensation and bronchopneumonia.

Of interest was the liver, which weighed 3,000 Gm. and was a bright homogeneous yellow. Histologically, this was the effect of fatty metamorphosis, with small bile duct occlusion. The pathologic diagnosis was toxic hepatitis (early acute Hanot's cirrhosis) with the contributing factors of alcohol and vitamin deficiency. This combination interferes with burning of sugar with fatty metamorphosis. We cite this case since the liver is like that described by Hanot. Recently it has been doubted that anyone has seen a case of so-called Hanot's cirrhosis, or that this diagnosis deserves a place in textbooks of pathology. The entity possibly should be given another name since other toxic factors causing like disturbances in metabolism undoubtedly cause like pictures.

INTRINSIC ASTHMA

Dr. Melich: A 51 year old white man was discharged from the Army in 1918 with the diagnosis of chronic pulmonary tuberculosis. In 1920 he was operated upon for sinusitis. In 1935 syphilis was diagnosed, for which he was treated for one year. He was admitted to this hospital in 1946 because of hematuria, at which time the diagnoses of slightly hypertrophied median bar, allergic rhinitis, multiple polyps, and deflected septum, left, were made. Surgery was done, removing the polyps and correcting the septum. In the last twenty years, the patient stated, he had had pneumonia four times. In 1945 he worked as a painter in a shipyard.

On examination, the patient was found to be a mouth breather. The cardiac sounds were barely audible, the rate was 106, and the blood pressure

was 90 systolic and 70 diastolic. The chest was emphysematous, and there were sibilant rales in both lungs. There was occasional wheezing.

The laboratory examination showed: urine, specific gravity 1,022 and albumin 1 plus; red blood cells 4.7 million, white blood cells 7,800, hemoglobin 87 per cent, with neutrophils 80 per cent, lymphocytes 18 per cent and monocytes 2 per cent, basophilic stipling 4 plus and serologic reactions positive; nonprotein nitrogen 29 and blood sugar 100.

On roentgen examination, a pyelogram showed a kink in the right ureter, and phenolsulfonphthalein appeared from both ureters within five minutes. A roentgenogram of the chest showed a chronic fibrotic tuberculosis of the apex of the right lung. The electrocardiogram showed a left axis deviation and a sinus tachycardia.

During the patient's five day stay in the hospital the course was progressively downhill. The clinical diagnoses were: intrinsic asthma, chronic allergic rhinitis with polyps, postoperative nasal septum, latent syphilis, inactive pulmonary tuberculosis, hypertrophied median bar and malnutrition. There was a guestion of whether a removal of shock organs in the nose one year previously might not have instigated the asthmatic episodes by destroying a first line of defense.

Dr. Raynolds: This is a case of intrinsic asthma. It starts in the thirties, forties, or fifties. The patient is sensitive to aspirin and should not be given morphine because it depresses respiration, nor should he be given atropine because it will make it more difficult for him to get rid of the secretions. A characteristic of the disease is the plugging of bronchi and bronchioles with a gelatinous mucus. The treatment is intravenous fluids and aminophylline. The patient may have to be subjected to bronchoscopy to remove the mucus and prevent suffocation. This is a relatively uncommon condition and is the type of asthma which may, and often does, kill the patient.

NECROPSY FINDINGS

Dr. Goldthwait: At necropsy, the significant findings were above the diaphragm. The right lung weighed 600 Gm.; the left lung weighed 450 Gm. In the apex of the right lung an area of fibrotic tissue 8 by 4 cm. in size bound the lung firmly to the wall of the chest. Both lungs were markedly emphasematous, floating high in water, and on section, small gelatinous white plugs popped out of the bronchioles. The larger bronchi and trachea were filled with a less viscous, more purulent material. Several small bronchopneumonic areas were noted bilaterally. The heart weighed 500 Gm., and the right ventricle appeared slightly enlarged. The ratio of left to right ventricle weights was 1.36, slightly below Stoffer's normal of 1.7 and indicating right-sided hypertrophy. Bone marrow showed eosinophilic hyperplasia. The anatomic diagnoses were intrinsic bronchial asthma, bronchopneumonia and cor pulmonale, mild.

Dr. Williams: There was little of note in this case but the lungs. They were ballooned out, and, as stated before, the bronchi and bronchioles were filled with gelatinous mucus producing a valve action which allowed air to be drawn in and as the condition advanced, preventing an equal amount from being expelled, resulting in suffocation. I visualize that if a guinea pig could be made to die slowly in anaphylactic shock, a somewhat similar state of affairs would exist. In rapid anaphylactic shock the bronchiolar muscles serve as the valves, allowing air to be drawn in, but because of spasm, preventing it from being expelled.

**Selected from the presentations at the weekly clinical and anatomic pathology conferences of the Staff of the Veterans Administration Hospital, Bay Pines, and edited by Dr. John W. Williams, Pathologist in Charge of Laboratory. The 2 cases published here were presented at a meeting of the Staff on Feb. 6, 1947 with the members of the Pinellas County Medical Society as guests.*

MEDICAL DISTRICT MEETINGS

The Chairman of the Council, Dr. W. Duncan Owens, has just announced that the dates of the four Medical District meetings have been officially set by the Council as follows:

Panama City, Monday, Oct. 27, 1947
Lakeland, Wednesday, Oct. 29, 1947
Ft. Pierce, Thursday, Oct. 30, 1947
St. Augustine, Saturday, Nov. 1, 1947

Every member of the Association is urged to make a note of these dates and make plans to attend the meeting in his district and any of the other three meetings as desired.

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WHAT VALUE HUMAN LIFE?

Physicians have been trained with one paramount objective in view, to save and prolong human life. But as we struggle to save a few lives, we are disheartened to think of those millions whose lives have been destroyed by war. And we are staggered when we realize that the whole sordid business is not settled; that conquest and expansion, totalitarianism and oppression are not things of the past; that the atomic bomb and super weapons make human life uncertain. We wonder about the safety of our children. We wonder if they will live to enjoy the liberty and freedom for which our forefathers, our leaders and we have fought.

In the past there has been chatter about humane warfare. War has been glorified and warriors made heroes. Defensive wars have been necessary, of course, and to defend one's country is a privilege, but no warfare can be humane. It would seem necessary then that we stand forward and allow no aggressive nation again to attain power whereby she can wage war. The trials and prosecutions of the Nazis for waging aggressive war would appear to be a step in the right direction, but possibly we have overlooked one point. The Nazis have been prosecuted for their aggressive acts, but those on the opposing side also guilty of aggressive warfare have not. The aggressive loser, but not the aggressive winner, is prosecuted, which might lead some to the conclusion that aggressive warfare is all right so long as one does not lose.

It is heartening to see that our statesmen are taking a firmer stand against the aggressor nation today. In the meantime we ask: What can we physicians do to make our efforts felt? We can continue our fight to heal the sick, which will show the high regard we have for the life of each individual and we can retain the ideals and ethics which have been long cherished by the medical profession. In this way we can look beyond the distressing present and show that we have faith that there is a desirable destiny for mankind.

PERSONAL RESPONSIBILITY FOR LEGISLATION AND PUBLIC RELATIONS

The time has arrived when doctors must become more interested and active in public relations and in both local and state politics. Most members of the medical profession are idealists and have long considered it somewhat beneath their dignity to take an active part in politics. The same observation holds true to a greater or less extent in all public relations. This attitude must change if we are to protect and improve our profession.

Observation and scrutiny of methods and practices over a period of years reveal many changes and innovations in all branches of busi-

ness. We, as physicians, have been inclined to adhere to the same methods practiced in 1847, when the first Code of Ethics was adopted. In spite of this reluctance to change, there is still no person who has more influence in the average community than the doctor. This influence should be utilized to its fullest extent in improving the relationship between the profession, the public and the lawmaking bodies. It must be used to its utmost if we are to insure the maximum benefits from public health legislation.

The doctor, as an idealist, is inclined to believe that such legislation is considered solely upon its merits after careful study of all the facts. On the contrary, when the legislature is in session, many bills are presented in rapid succession, and the time available for thorough study by the entire group of legislators is short. There are, of course, many lobbyists for and against these bills; and this fact, in itself, tends to produce confusion. At such a time the individual legislator wants and needs the carefully considered advice of an honest and intelligent group who are vitally interested in and familiar with the subject at hand. It is only in this way that he can be expected to support intelligently such measures as will aid the medical profession in improving public health.

Those of us who make up the county and state medical societies have a definite obligation in this regard. We are inclined to believe that we have discharged this obligation with the payment of our annual dues, and we have been guilty of leaving the responsibility of the conduct of the Association and its legislative matters in the hands of a few officers and committeemen. This attitude has fostered a lack of coordination between the legislative committee and the constituent county medical societies. It has been the result of lethargy and indifference on the part of the majority of the members of the Association.

In many instances when the chairman of the Committee on Legislation and Public Policy requests that the officers and members of the local society contact their legislators urging support for, or opposition to, a proposed bill, these officers and members are in total ignorance of the existence of the bill or its content. There have been instances when the Committee wished to oppose a bill which its members believed detrimental to the best interests of the medical profession, and, through misinterpretation, the local societies have wired their representatives to support it.

To correct such a condition it would seem advisable for each county society to have a standing legislative committee, either elected or appointed annually. There should be a close cooperation between this committee and the Association's Committee. Each local committee should be furnished copies of all bills pertaining to public health or medical practice as soon after their introduction as is practical. These bills should be carefully studied by the committee and reported on at its regular meetings. In this way, the local group would be in a position to help the Committee if and when they were called upon to do so.

In the average community no one man has influence with all the local legislators, but a committee could easily cultivate the friendship of these men and would, I am sure, find them most receptive to the physician's opinion and advice on matters of public health. It would seem wise for this committee to meet with the local representatives and senator within thirty days of the convening of the legislature and to discuss with them bills sponsored by the Association as well as the reasons for which they are being sponsored. I am sure that such a practice would be welcomed by our politicians as a constructive measure. It is difficult, or impossible, for the Committee on Legislation and Public Policy to contact satisfactorily the majority of the legislators when bills are proposed.

We who have never served on this important Committee have no conception of the tremendous task that we have thrust upon its members; yet, we expect them to protect us without any effort on our part. When it is impossible for the Committee single-handedly to secure the cooperation of a majority of the lawmakers, we are prone to lay the blame on the members of the Committee rather than to accept it ourselves as a measure of our own poor cooperation and support.

The Association has recently deemed it advisable to employ a full time man whose duties are to handle all matters concerning public relations. This progressive step necessarily involves additional expense and has therefore received strenuous opposition from many members. The pro rata expense of this very necessary activity is, however, small in comparison with the benefit derived and it is certainly less than any of us frequently spend for an evening's entertainment.

In conclusion, if we continue with an isolationist policy where public health and politics are concerned and shun intelligent, organized effort, socialized medicine will be thrust upon us, and we, the members of the medical profession, will be largely responsible for it. With energetic and wholehearted cooperation from each member of the Association and with close coordination between county societies and the Association, we should have little to fear from improper medical legislation originating in Tallahassee. In addition, such a united front would be productive of model effective medical laws, which should deter any overzealous federal legislation directed toward the socialization of medicine. Without such an effort we can no longer expect to continue unmolested the practice of medicine as free agents, but must accept the inevitable suffocation of initiative and enterprise inherent in socialization under a lay board.

'A WRINKLE IN GOOD PUBLIC RELATIONS'

A constructive suggestion in line with the foregoing editorial appeared recently in News Letter, published by the Council on Medical Service of the American Medical Association. In an article entitled "Public Relations in Action," Dr. Gordon B. Leitch of Portland, Ore., described "a wrinkle in good public relations," practiced for years by the Oregon State Medical Society, which other state medical organizations might well consider.

The legislative committee of this society, sometime during each biennial session of the state legislature, gives a private dinner for state officials and members of the legislature whose positions or duties have some medical aspects or implications. Those present on this occasion in 1947 were the Governor, Secretary of State, President of the Senate, Speaker of the House, members of the Senate and House committees on medicine, dentistry and pharmacy, members of the state board of health and state industrial accident commission, the state insurance commissioner, the superintendent of public instruction and members of the board of higher education, members of the board of medical examiners, and the officers and members of the state medical society.

An hour or two of personal intermingling on a most informal basis precedes the dinner. At the conclusion of the dinner, the chairman introduces each guest, who rises, acknowledges the introduction and immediately resumes his seat. There are no speeches, and no effort is made to discuss or influence any item of legislation.

The custom arose from a small dinner party given several years ago in honor of an old time physician senator who had rendered valiant service to his profession and the public in the legislature. Since his death, it has been continued in accordance with the wishes of the many legislators who have welcomed the opportunity to get personally acquainted with the physicians and to know them better. The popularity of this social function with the legislators and public officials is ascribed in large measure to the conspicuous absence of speeches and efforts at lobbying.

CENTENNIAL POSTAGE STAMP

The three cent stamp issued by the Post Office Department of the United States in commemoration of the work of the physician is a tribute every member of the medical profession appreciates. Great interest attached to the issuing of this stamp as a part of the celebration of the birth of the American Medical Association one hundred years ago, and special ceremonies marked its advent.

The stamp reproduces the painting "The Doctor" by Sir Samuel Luke Fildes, R.A., which was exhibited in the auditorium at the Centennial Celebration of the American Medical Association in Atlantic City in June. This original study hangs in the Guthrie Clinic of the Robert Packer Hospital in Sayre, Pa., and from it the large painting called "The Doctor" which hangs in the Tate Gallery in London was painted.

Sir James Clark, F.R.S., K.C.B., the physician in the painting, was a well known scientist, educator and author of his day, who published a number of books on medical subjects. He was born in 1788, and he died in 1870 at the age of 82. Four years before his death he was made a Knight Commander of the Bath. He was physician to the royal family in Great Britain and also to Prince Leopold, later king of the Belgians. The artist, however, chose to portray him, not in attendance upon the Queen or a princess of the royal house, but at the bedside of a child in the cottage home of a rural family.

WHO EXPERT COMMITTEE ON BIOLOGIC STANDARDIZATION

Medical experts of seven countries, the Netherlands, Switzerland, England, Denmark, India, France and the United States, met in Geneva, Switzerland, in June for the purpose of assuring more effective treatment of disease throughout the world through the use of drugs, vaccines and serums of tested and uniform value. This group functions as the Biologic Standardization Committee of the World Health Organization, Interim Commission, and it is one of nine expert committees appointed to study the prevention and treatment of disease on a worldwide basis. Representing the United States on this committee is Dr. M. V. Veldee, Chief of the Biologics Control Laboratory, National Institute of Health, United States Public Health Service, Washington, D. C.

This committee seeks to further international work begun more than a decade ago by the League of Nations. During the war years, when a free exchange of biologic information was impossible, the national laboratories of three continents worked independently, making many advances in standardization of well known drugs, serums and vaccines. Some of these laboratories also undertook standardization of products developed during the war years, such as penicillin and sulfa drugs. The biologists are now seeking the freest exchange of experience and practices in an attempt to achieve for all nations standards that will provide biologic products of uniform purity, dosage and effectiveness.

Expressive of the emphasis of modern medicine, many of the products studied for standardization are designed to prevent the incidence of a specific disease rather than to cure it. They include toxoids used to immunize children and adults against diphtheria, the vaccine that has made whooping cough less of a scourge than it was a generation ago, antityphoid serums, and smallpox and yellow fever vaccines. The BCG vaccine for immunization against tuberculosis is regarded as of particular importance because of the increased incidence of this disease as a result of the deprivations of war.

PHYSICIAN POPULATION INCREASES

Additions to the medical profession of the United States reached new heights in 1946. The unprecedented increase apparently reflects mainly the migration of veteran medical officers, many of whom are seeking new locations after the disrupting influences of war. With 6,959 physicians admitted and 3,358 removed by death or temporary residence in a foreign country, the physician population was increased by 3,601.* It would appear that the accelerated school program during the war is now providing a greater physician-civilian population in the country generally.

The increase in the number of licentiates over the preceding year was spectacular in some states with large urban populations and also in some rural states. California licensed the largest number, 2,045, and both New York and Illinois licensed more than 1,000. No state licensed fewer than 30. Only Arkansas, Indiana and Tennessee failed to issue more licenses than in 1945. There were 16,129 licenses issued.

In Florida, 57 licentiates received their first license to practice medicine and surgery in 1946 and therefore represent additions to the medical profession. In all, 318 licenses were issued during the year. In the last five years (1942-1946) 1,064 candidates have been examined in Florida, only 11.7 per cent of whom failed. This percentage of failures compares favorably with the percentage of 11.6 for the nation as a whole in this five year period.

* Medical Licensure Statistics for 1946, J. A. M. A. 134: 255 (May 17) 1947.

STATE BOARD OF MEDICAL EXAMINERS MEETS

In session in Jacksonville on June 24 and 25 to conduct the semiannual examinations for candidates seeking a license to practice medicine in Florida, the Florida State Board of Medical Examiners elected Dr. Robert G. Nelson of Tampa to serve as its president for the ensuing year. Dr. Harold D. Van Schaick of Miami was re-elected secretary-treasurer, and Dr. Homer L. Pearson, Jr., of Miami was named vice president.

Other members of the Board are: Dr. I. W. Chandler, Avon Park; Dr. Julius C. Davis, Quincy; Dr. Howard G. Holland, Leesburg; Dr. S. G. Hollingsworth, Bradenton; Dr. Joseph B. Kollar, Vero Beach; Dr. George S. McClellan, Pompano, and Dr. Frank D. Gray, Orlando.

At this session 183 applicants took the examinations. The names of the successful candidates will be published in a later issue of The Journal

UNIVERSITY AWARD FOR "DOCTORS—THEN AND NOW"

Signal recognition has been given the series of dramatized broadcasts entitled "Doctors—Then and Now," which was presented by the American Medical Association over the National Broadcasting Company network as a feature of its Centennial Celebration. This program, portraying the progress of medicine in the United States during the century of this organization's existence, received first award in the "Civic and Service Organizations" class at the Seventeenth Annual Session of Ohio State University's American Exhibition of Educational Radio Programs, held in Columbus in May.

The citation read: "For presenting to the listening audience in a dramatic and most effective manner the ideals and principles which motivate the members of the medical profession in their struggle against human illness."

CARE FOR THE HUNGRY

Millions of Americans are sending parcels to friends and relatives in Europe. Are you? CARE, the Cooperative for American Remittances to Europe, Inc., is the only non-profit, government-approved organization set up especially to help people in this country send packages to designated individuals abroad. It offers food and other package service to Austria, Belgium, Czechoslovakia, France, Finland, Greece, Hungary, Italy, Norway, the Netherlands, Poland, Rumania and the American, British and French zones of Germany plus all of Berlin. Also, Britain is now open to receipt of CARE packages.

CARE is composed of twenty-seven major welfare agencies concerned with sending aid to Europe. General Eisenhower termed it a "personal expression of international goodwill." With the end of broad government feeding programs, it is fortunate that individual Americans can, through CARE, still aid in the physical rebuilding of Europe's people, for the period of want is by no means ended. In many war-devastated areas, the food shortage is still acute. Disrupted transportation, poor crops and a shortage of labor have combined to provide only subsistence diets for millions of people already weakened by years of hunger. Rising disease rates, especially for tuberculosis, testify to the continuing need for aid.

The CARE food package contains more than twenty-one pounds of meat, fats, sugar, milk, flour, chocolate, coffee and other essential foods which are practically unobtainable in Europe today. The blanket package contains two all wool Army blankets with sewing materials and soles and heels for repairing worn shoes; the woolen package contains 3½ yards of pure woolen cloth with lining material and sewing equipment for making a man's suit or woman's coat; and the cotton package contains 17 yards of fabric by the yard.

The total cost of each of the four packages is just $10. Orders are sent by air mail to the designated countries in Europe, and delivery is made from local European warehouses. Operating through agreements with the European governments, CARE guarantees delivery of its parcels ration-free, duty-free and tax-free. Individuals and organizations can send CARE packages to friends and relatives by mailing orders to CARE headquarters, 50 Broad Street, New York 4, N. Y. In no other way can you send so much for so little.

A. M. A. CONVENTION ATTENDANCE

The registered attendance at the convention celebrating the one hundredth anniversary of the establishment of the American Medical Association held in Atlantic City last month was 15,667. This largest assemblage of physicians ever held anywhere in the world assured the continuous participation of a capacity audience for every one of the scientific sections and every exhibit.

Florida had excellent representation on this great occasion with 165 members of the Association in attendance. The official roster includes the following names:

APALACHICOLA: Terry Bird. ARCADIA: Gordon H. McSwain. BARTOW: Chester H. Murphy. BRADENTON: Lowrie W. Blake. COCOA: Thomas C. Kenaston. CORAL GABLES: A. Daniel Amerise, Jack Q. Cleveland, Warren W. Quillian. DAYTONA BEACH: Cleland D. Cochrane, Norman E. Williams. DUNEDIN: John A. Mease, Jr. FERNANDINA: Henry B. Dickens, Jr. FORT LAUDERDALE: Eugene C. Chamberlain, Anna A. Darrow, Elliott M. Hendricks, Garland M. Johnson, Richard A. Mills, Alva R. Taylor. FORT PIERCE: Jerome A. Megna. GAINESVILLE: John H. Thomas, William C. Thomas. HOLLYWOOD: Rudolph W. Heath. JACKSONVILLE: James L. Borland, Cornelia Morse Carithers, Hugh A. Carithers, Jr., Thomas B. Christian, John D. Ferrara, Banks H. Goodale, O. E. Harrell, William G. Harris, Crowell W. Johnston, Frederick W. Krueger, Louie M. Limbaugh, Shaler Richardson, Clarence D. Rollins, Sidney Stillman, Edward C. Watt, Ashbel C. Williams, J. Frank Wilson. LAKE WALES: Bruce R. Tinkler.

LAKELAND: James R. Boulware, Jr., Fred S. Gachet, Marion W. Hester. MIAMI: Lawrence Adler, Isadore

H. Agos, Samuel Aronovitz, Laura M. Hobbs Bourne, Edward W. Cullipher, Frederick E. Farrer, Harold H. Fox, M. Jay Flipse, Elmo D. French, J. Raymond Graves, Charles E. Hebard, Leslie M. Jenkins, Walter C. Jones, George D. Lilly, A. Buist Litterer, Joseph Lomax, Joseph H. Lucinian, Donald F. Marion, Matthias P. Meehan, James H. Mendel, Claude G. Mentzer, Albert H. Mouradian, E. Sterling Nichol, Benjamin G. Oren, Samuel W. Page, Jr., Homer L. Pearson, Max Pepper, Kenneth Phillips, James H. Putman, Harold Rand, Jack O. W. Rash, Wiley M. Sams, Ralph S. Sappenfield, Donald W. Smith, John W. Snyder, Robert T. Spicer, Richard F. Stover, Earl R. Templeton, Herbert W. Virgin, Jr., George Williams, Jr., Frank M. Woods, Scheffel H. Wright.

MIAMI BEACH: William H. Bernstein, Maryland B. Byrne, Max Dobrin, Elias Freidus, Meyer J. Glick, Max Gratz, Julius D. Holly, Emil M. Isberg, Saul H. Kaplan, Bernard S. Kleinman, Morris J. Levine, Alexander Libow, Meyer B. Marks, David A. Nathan, Julius A. Oshlag, Lewis Palay, Cayetano Panettiere, Julius R. Pearson, Murray M. Reckson, Maurice J. Rose, Edward Roth, Milton S. Saslaw, Sol Selevan, M. P. Travers, S. Charles Werblow, D. Ward White, Maurice Zimmerman. OCALA: Henry L. Harrell, Carl S. Lytle, Robert E. Thompson. ORLANDO: Clarence Bernstein, J. Rocher Chappell, Joseph H. Chiles, Edward T. Furey, Donald C. Hartwell, Duncan T. McEwan, Meredith Mallory, Pleasant L. Moon, Jr., Don C. Robertson, W. Dean Steward.

PALM BEACH: George M. Dawson, Fred E. Manulis, Bailey B. Sory, Jr. PENSACOLA: Luther C. Fisher, Jr., Clyde E. Miller, Jr. QUINCY: William W. Massey. SAINT AUGUSTINE: Eugene T. Foy, Vernon A. Lockwood. SAINT PETERSBURG: Arnold S. Anderson, James A. Bradley, Dean W. Hart, Whitman C. McConnell, Norval M. Marr, Robert J. Needles, Orville N. Nelson, J. Braden Quicksall, H. Milton Rogers, Franklin W. Roush, Jr. SANFORD: Thomas F. McDaniel, Harry Z. Silsby. SARASOTA: John M. Butcher, Joseph Halton, Cecil E. Miller. TALLAHASSEE: Sarah P. White. TAMPA: Edith P. Mols Corlew, Joshua C. Dickinson, Kenneth G. Gould, Nathan L. Marcus, Thomas F. Nelson, Anthony P. Perzia, Burdette Smith, Morris Waisman. WEST PALM BEACH: W. Wellington George, V. Marklin Johnson, Lloyd J. Netto, David A. Newman, James R. Sory. WINTER HAVEN: Lee E. Parmley, Wiley T. Simpson. ZEPHYRHILLS: Donald G. Bradshaw.

POSTGRADUATE COURSE IN INFECTIOUS DISEASE

The Emory University School of Medicine announces a postgraduate course in infectious diseases to be conducted in cooperation with the Georgia Department of Public Health. It will be held September 18 and 19, 1947 at the Grady Memorial Hospital, Atlanta, Ga.

This course is planned specifically for the public health physician and the general practitioner. It is intended to be a practical and comprehensive study of the latest methods of clinical and laboratory diagnosis and treatment of communicable diseases, including venereal infections.

Interested physicians may obtain further information from Dr. R. H. Oppenheimer, Grady Memorial Hospital, Atlanta 3, Ga.

STATE NEWS ITEMS

Dr. F. A. Copp of Jacksonville, medical officer of the American Red Cross Volunteer Life Saving Corps, attended the National Convention of the American Red Cross in Cleveland in June. Because of his long volunteer service in Red Cross work and his knowledge of first aid, water safety and accident prevention, Dr. Copp was chosen for this honor by the officers of the Southeastern Area of the Red Cross.

Indiana now has a law requiring annual registration of physicians, which became effective July 1, 1947.

The Twelfth Annual Assembly of the United States Chapter of the International College of Surgeons will be held at the Palmer House in Chicago from September 28 to October 4, 1947, inclusive.

The Third American Congress on Obstetrics and Gynecology, sponsored by the American Committee on Maternal Welfare, Inc., will convene on Sept. 8, 1947 in the Municipal Auditorium in St. Louis and will continue through September 12. The program is planned to have wide appeal not only to obstetricians and gynecologists but also to general practitioners in particular and to members of allied professions. Dr. Ralph W. Jack, Huntington Building, Miami, is the membership chairman for Florida.

Dr. W. C. McConnell of St. Petersburg represented the Association at the first National Conference of County Medical Societies, held in Atlantic City, N. J., in June as part of the Centennial Celebration of the American Medical Association. Dr. McConnell is, in point of service, the oldest county medical society secretary in the state, having served the Pinellas County Medical Society in this capacity since 1935.

One of the delightful gatherings held in Miami at the time of the annual convention of the Association was a cabana party and buffet supper at the Deauville Hotel and Casino on April 20, 1947, attended by sixteen women physicians. At this meeting, the South Florida Branch of the American Medical Women's Association was organized. Dr. Laura M. Bourne of Miami was elected to serve as the first president of this group.

ANNOUNCEMENT

MEDICAL DISTRICT MEETINGS

The Chairman of the Council, Dr. W. Duncan Owens, has just announced that the dates of the four Medical District meetings have been officially set by the Council as follows:

Panama City, Monday, Oct. 27, 1947

Lakeland, Wednesday, Oct. 29, 1947

Ft. Pierce, Thursday, Oct. 30, 1947

St. Augustine, Saturday, Nov. 1, 1947

Every member of the Association is urged to make a note of these dates and make plans to attend the meeting in his district and any of the other three meetings as desired.

SCHEDULE OF MEETINGS

ORGANIZATION	PRESIDENT	SECRETARY	ANNUAL MEETING
a Medical Association	William C. Thomas, Gainesville	Robert B. McIver, Jacksonville	St. Augustine, 1948
a Medical Districts	W. Duncan Owens, Miami Beach	Council Chairman	
Northwest	William C. Roberts, Panama City	Irby H. Black, Live Oak	Panama City, Oct. 27, 1947
Northeast	Vernon A. Lockwood, St. Augustine	Rabun H. Williams, Eustis	St. Augustine, Nov. 1, 1947
Southwest	James R. Boulware, Jr., Lakeland	John M. Butcher, Sarasota	Lakeland, Oct. 29, 1947
Southeast	Adrian M. Sample, Fort Pierce	Russell B. Carson, Ft. Lauderdale	Fort Pierce, Oct. 30, 1947
can Medical Association	H. H. Shoulders, Nashville	Geo. F. Lull, Chicago	
ern Medical Association	E. L. Henderson, Louisville, Ky.	Mr. C. P. Loranz, Birmingham	
ma Medical Association	Carl A. Grote, Huntsville, Ala.	Douglas L. Cannon, Montgomery	Birmingham
ia, Medical Assn. of	Ralph Hill Chaney, Augusta, Ga.	Edgar D. Shanks, Atlanta	Augusta, Ga., 1947
a—			
demy of Medicine	Eugene G. Peek, Ocala	M. Crego Smith, Clearwater	St. Augustine, 1948
tion, Am. College Phys.	E. Sterling Nichol, Miami	R. D. Thompson, Orlando	St. Augustine, 1948
ic Science Exam. Board	Ezda M. Deviney, Ph.D., Tallahassee	M. W. Emmel, D.V.M., Gainesville	Gainesville, Nov. 1, 1947
tal Society, State	W. P. Wood, D.D.S., Tampa	A. J. Fillastre, D.D.S., Lakeland	
m. and Syph., Soc. of	Lauren M. Sompayrac, Jacksonville	Wesley W. Wilson, Tampa	St. Augustine, 1948
lth Officers' Society	Wm. E. Van Landingham, W. P. B.	Lorenzo L. Parks, Jacksonville	St. Augustine, 1948
pital Association	E. C. H. Pearson, W. P. Beach	Mr. H. A. Schroder, Jacksonville	Orlando, April, 1948
pital Service Corporation	Mr. W. E. Arnold, Jacksonville	Mr. H. A. Schroder, Jacksonville	Orlando, April, 1948
ustrial & Railway Surgeons	Lloyd J. Netto, W. P. Beach	J. H. Mitchell, Jacksonville	St. Augustine, 1948
dical Examining Board	Frank D. Gray, Orlando	H. D. Van Schaick, Miami	Jacksonville, 1947
dical Postgraduate Course	Turner Z. Cason, Jacksonville	Chairman	
dical Service Corporation	Leigh F. Robinson, Ft. Lauderdale	Herbert E. White, St. Augustine	Jacksonville
rology & Psychiatry	H. Mason Smith, Tampa	William H. McCullagh, Jacksonville	St. Augustine, 1948
ses Association, State	Miss Elizabeth Reed, Jacksonville	Mrs. Phyllis R. Leonard, St. Augustine	Daytona Beach, Fall, 1947
thal. & Otol., Soc. of	William Y. Sayad, W. P. B.	W. Jerome Knauer, Jacksonville	St. Augustine, 1948
hological Society	V. M. Johnson, West Palm Beach	Gretchen V. Squires, Pensacola	St. Augustine, 1948
atric Society	James R. Boulware, Jr., Lakeland	Hugh A. Carithers, Jacksonville	St. Augustine, 1948
rmaceutical Association, State	Mr. C. G. Hamilton, Pompano	Mr. R. Q. Richards, Ft. Myers	
lic Health Association	Frank V. Chappell, Tampa	Miss Elsie Hyatt, Jacksonville	Tampa, Oct. 23-25, 1947
iological Society	J. Maxey Dell, Jr., Gainesville	John A. Beals, Jacksonville	St. Augustine, 1948
erculosis & Health Assn.	Mr. Lacy W. Thomas, Groveland	Mrs. May Pynchon, Jacksonville	
Hospital Conference	Mr. Frank Groner, New Orleans	Mr. Burton M. Battle, New Orleans	Biloxi, Miss.
eastern Surgical Congress	Herbert Acuff, Knoxville, Tenn.	B. T. Beasley, Atlanta	Atlanta, Ga., Mar. 8-11, 1948

	SOCIETY	PRESIDENT	SECRETARY	MEETING DATE	MEMBERS Total	MEMBERS Paid	COUNCILOR
A	Bay	C. W. Shackelford, M.D. Box 62 Panama City	William C. Roberts, M.D. 348 Cove Blvd. Panama City		13	100%	
	Escambia *Santa Rosa	S. G. Kennedy, M.D. 816 N. Palafox St. Pensacola	N. S. Rubin, M.D. 404 Blount Bldg. Pensacola	2nd Tuesday 8:00 P.M.	56	54	A-1-48 Wm. C. Roberts, M.D. Panama City
	Franklin-Gulf	T. Meriwether, M.D. Wewahitchka	J. R. Norton, M.D. Port St. Joe	3rd Tuesday Odd Months	7	2	
	Jackson *Calhoun	Francis M. Watson, M.D. 120 Deering Marianna	C. A. Adams, Jr., M.D. Marianna	3rd Thursday 7:30 P.M.	14	100%	
	Walton-Okaloosa	Arthur G. Williams, M.D. Lakewood	Ralph B. Spires, M.D. DeFuniak Springs	3rd Thursday 8:00 P.M.	10	100%	
	Washington-Holmes	N. J. Dawkins, M.D. Vernon	B. W. Dalton, M. D. Chipley		5	100%	
	Columbia *Baker-Hamilton	James F. Pitman, M.D. Blanche Hotel Annex Lake City	Thomas H. Bates, M.D. 27 W. Madison St. Lake City	1st Monday 7:30 P.M.	16	13	
	Leon-Gadsden-Liberty-Wakulla-Jefferson	W. G. Miles, M. D. Chattahoochee	G. H. Garmany, M.D. Box 487 Tallahassee	Quarterly 7:30 P.M.	41	39	A-2-49 Irby H. Black, M.D. Live Oak
	Madison-Suwannee	Joshua M. Price, M.D. Live Oak	Irby H. Black, M.D. 918 W. Howard St. Live Oak		10	100%	
	Taylor *Dixie-Lafayette	Ralph J. Green, M.D. Perry	Walter J. Baker, M.D. Foley	Last Friday 8:00 P.M.	3	100%	175
B	Alachua *Bradford, Gilchrist Union	John H. Thomas, M.D. 749 E. Main St. No. **Gainesville**	Stuart D. Scott, M.D. 331 W. University Ave. Gainesville	2nd Wednesday 7:30 P.M.	32	28	B-3-48 Vernon A. Lockwood, M.D. St. Augustine
	Duval *Clay	L. S. Laffitte, M.D. Medical Arts Bldg. Jacksonville 4	C. C. Mendoza, M.D. 430 W. Monroe St. Jacksonville 2	1st Tuesday 8:15 P.M.	218	208	
	Marion *Levy	Henry L. Harrell, M.D. 1206 E. Ocklawaha Ave. Ocala	B. F. Drake, M.D. Professional Bldg. Ocala	3rd Wednesday 12:30 P.M.	31	28	
	Nassau	D. G. Humphreys, M. D. Fernandina	John W. McClane, M.D. Fernandina	2nd Wednesday 8:00 P.M.	8	7	
	Putnam	Grover C. Collins, M.D. 502 Reid St. Palatka	Claude M. Knight, M.D. Palatka	2nd Tuesday 6:00 P.M.	10	100%	
	St. Johns	G. W. Potter, M.D. 145 King St. St. Augustine	S. R. Cafaro, M.D. Exchange Bk. Bldg. St. Augustine	3rd Tuesday 8:30 P.M.	15	100%	
	Brevard	Gerard E. Christie, M.D. Box 151 Titusville	I. K. Hicks, M.D. Melbourne	2nd Tuesday	14	11	
	Lake *Sumter	John F. McGuire, M.D. 804 Montrose Clermont	Matthew Arnow, M.D. Eustis	1st Thursday 12:30 P.M.	20	17	B-4-49 Rabun H. Williams, M.D. Eustis
	Orange *Osceola	W. G. Page, M.D. 322 E. Central Orlando	James G. Economon, M.D. 108 E. Central Orlando	3rd Wednesday 8:00 P.M.	125	121	
	Seminole	Guy S. Selman, M.D. Sanford	Frank L. Quillman, M.D. Box 158 Sanford	2nd Tuesday 5:30 P.M.	12	11	
	Volusia *Flagler	W. L. Jennings, M.D. 111 Broadway Daytona Beach	R. L. Miller, M.D. 258½ S. Beach St. Daytona Beach	2nd Tuesday 7:30 P.M.	52	47	537
C	Hillsborough	Edward F. Shaver, M.D. Tampa Theatre Bldg. Tampa	H. G. Cole, M.D. 315 Wallace S. Bldg. Tampa 2	1st Tuesday 8:00 P.M.	133	100%	
	Manatee	Lowrie W. Blake, M.D. Box 318 Bradenton	Millard P. Quillian, M.D. Walcaid Building **Bradenton**	3rd Tuesday 7:00 P.M.	16	100%	C-5-49 John M. Butcher, M.D. Sarasota
	Pasco-Hernando-Citrus	Jere W. Kirkpatrick, M.D. Box 303 Inverness	W. Wardlaw Jones, M.D. Box 247 Dade City	2nd Thursday 7:00 P.M.	13	100%	
	Pinellas	J. Braden Quicksall, M.D. 526 13th Ave., N.E. St. Petersburg	W. C. McConnell, M.D. 313 First Federal Bldg. St. Petersburg 4	1st and 3rd Thursdays 6:30 P.M.	147	100%	
	Sarasota	Reeves A. Wilson, M.D. 317 So. Orange Ave. **Sarasota**	Henry J. Vomacka, M. D. Terrill Apts. Sarasota	2nd Tuesday 8:30 P.M.	25	24	
	DeSoto-Hardee-Highlands-Charlotte-Glades	Miles A. Collier, M.D. Wauchula	M. C. Kayton, M. D. Wauchula	2nd Tuesday 8:00 P.M.	21	100%	
	Lee *Collier, Hendry	A. L. Girardin, Jr., M.D. 212 Richards Bldg. Fort Myers	Curtis R. House, M.D. Leon Bldg Fort Myers	3rd Tuesday 7:30 P.M.	20	13	C-6-48 James R. Boulware, Jr., M.D. Lakeland
	Polk	Edgar Watson, M.D. Box 1021 Lakeland	Joe M. Bosworth, M.D. Box 1202 **Lakeland**	2nd Wednesday 1:00 P.M.	74	70	449
D	Palm Beach	C. J. Derrick, M.D. Box 1164 W. Palm Beach	Victor Clarholm, M.D. Box 672 W. Palm Beach	3rd Monday 8:00 P.M.	84	80	D-7-48 Adrian M. Sample, M.D. Ft. Pierce
	St. Lucie-Okeechobee-Indian River-Martin	Erasmus B. Hardee, M.D. Vero Beach	Adrian M. Sample, M.D. Box 176 Ft. Pierce	3rd Thursday 8:00 P.M.	19	100%	
	Broward	Curtis H. Sory, M.D. 15 S.E. 16th St. Ft. Lauderdale	Rudolph W. Heath, M.D. First National Bank Bldg. Hollywood	4th Tuesday 8:00 P.M.	59	56	D-8-49 Russell B Carson, M.D. Ft. Lauderdale
	Dade	Warren W. Quillian, M.D. 134 Alhambra Circle Coral Gables 34.	Jack Q. Cleveland, M.D. 147 Alcazar Ave. Coral Gables	1st Tuesday 8:30 P.M.	416	403	
	Monroe	James B. Parramore, M.D. 523 Whitehead St. Key West	A. H. Hamilton, M.D. 611 Fleming St. Key West	2nd Thursday 8:00 P.M.	10	9	588

*Supervise and aid until organized separately.

Total 1749